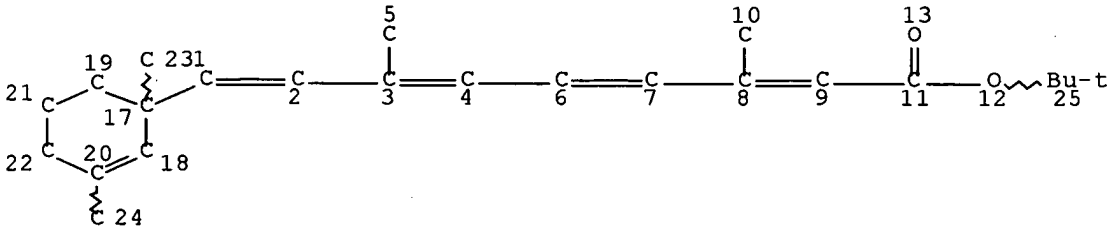
***** QUERY RESULTS *****

=> d his l18

(FILE 'HCAPLUS' ENTERED AT 09:35:19 ON 18 DEC 2007)
L18 0 S L17

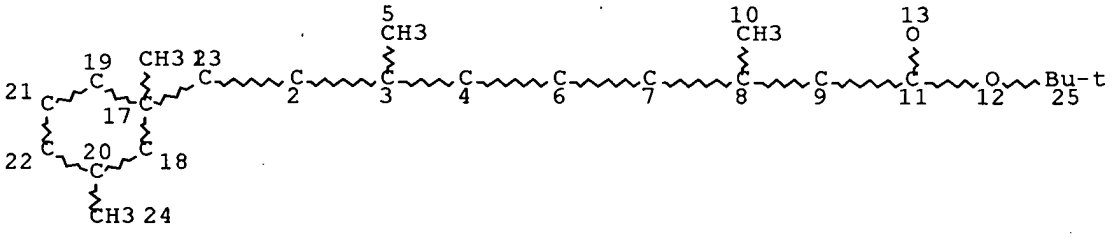
=> d que stat l18
L11 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE
L13 0 SEA FILE=REGISTRY SSS FUL L11
L14 STR



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 13
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE
L16 0 SEA FILE=REGISTRY SSS FUL L14
L17 0 SEA FILE=REGISTRY ABB=ON PLU=ON L13 OR L16
L18 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L17

******* INVENTOR RESULTS *******

```
=> d his l32

     (FILE 'HCAPLUS' ENTERED AT 09:40:24 ON 18 DEC 2007)
L32          35 S L25 OR L31
                SAVE TEMP L32 QAZ767HCAIN/A

     FILE 'STNGUIDE' ENTERED AT 09:50:26 ON 18 DEC 2007

=> d que l32
L19         956 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("DELUCA HECTOR"/AU OR
                "DELUCA HECTOR F"/AU OR "DELUCA HECTOR FLOYD"/AU)
L20         101 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("CLAGETT DAME M"/AU OR
                "CLAGETT DAME MARGARET"/AU)
L21          16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "GOWLUGARI SUMITHRA"/AU
L22          59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 AND ((L20 OR L21))
L23           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND L21
L24          59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 OR L23
L25           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND RETINOID
L30      170099 SEA FILE=HCAPLUS ABB=ON  PLU=ON  DERM? OR EPIDERM? OR SKIN(W)(D
                ISEASE? OR DISORDER?) OR ECZEMA OR KERATOSIS?
L31          30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND L30
L32          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 OR L31


=> d l32 1-35 ibib ab

L32  ANSWER 1 OF 35  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2007:1151835  HCAPLUS  Full-text
DOCUMENT NUMBER:         147:427590
TITLE:                   Preparation of 2-methylene-1α-hydroxy-19,21-
                         dinorvitamin D3 analogs as pharmaceuticals
INVENTOR(S):             DeLuca, Hector F.; Plum, Lori A.;
                         Clagett-Dame, Margaret; Barycki, Rafal
PATENT ASSIGNEE(S):      USA
SOURCE:                  U.S. Pat. Appl. Publ., 21pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ----------          ----   --------    ---------------------    --------
     US 2007238702        A1    20071011    US 2007-697418           20070406
PRIORITY APPLN. INFO.:                      US 2006-744383P      P   20060406
OTHER SOURCE(S):         MARPAT 147:427590
AB   Vitamin D analogs of formula I [X1, X2 = H, protecting group] are prepared
     Such compds. are used in preparing pharmaceutical compns. and are useful in
     treating a variety of biol. conditions.  Thus, SY-44 (I; X1 = X2 = H) was
     prepared, and was slightly less active than 1α,25-dihydroxyvitamin D3 in
     inducing differentiation of HL-60 cells.


L32  ANSWER 2 OF 35  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2007:1151829  HCAPLUS  Full-text
DOCUMENT NUMBER:         147:427589
TITLE:                   Preparation of 2-methylene-1α,25-dihydroxy-
```

```
=> d his nofile

     (FILE 'HOME' ENTERED AT 08:45:38 ON 18 DEC 2007)

     FILE 'HCAPLUS' ENTERED AT 08:45:53 ON 18 DEC 2007
L1             1 SEA ABB=ON  PLU=ON  US20040167215/PN
                 D ALL
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 08:47:17 ON 18 DEC 2007
L2            38 SEA ABB=ON  PLU=ON  (302-79-4/BI OR 102121-60-8/BI OR 106685-58
                 -9/BI OR 107430-51-3/BI OR 110952-22-2/BI OR 118292-41-4/BI OR
                 125316-60-1/BI OR 125973-56-0/BI OR 140939-20-4/BI OR 143984-56
                 -9/BI OR 146670-35-1/BI OR 146670-36-2/BI OR 146670-40-8/BI OR
                 153559-49-0/BI OR 156691-84-8/BI OR 16409-17-9/BI OR 174546-47-
                 5/BI OR 179045-64-8/BI OR 180713-37-5/BI OR 186912-90-3/BI OR
                 186912-91-4/BI OR 403850-48-6/BI OR 4759-48-2/BI OR 5300-03-8/B
                 I OR 5352-74-9/BI OR 54350-48-0/BI OR 57-88-5/BI OR 68070-35-9/
                 BI OR 71441-28-6/BI OR 730961-06-5/BI OR 742099-81-6/BI OR
                 742099-97-4/BI OR 742100-10-3/BI OR 742100-24-9/BI OR 75-65-0/B
                 I OR 76-09-5/BI OR 86471-16-1/BI OR 94497-51-5/BI)
                 D SCAN L2
                 E "RETINOIC ACID, 2-HYDROXY-1,1,2-TRIMETHYLPROPYL ESTER"/CN
L3             1 SEA ABB=ON  PLU=ON  "RETINOIC ACID, 2-HYDROXY-1,1,2-TRIMETHYLPR
                 OPYL ESTER"/CN
                 D IDE
L4          2153 SEA ABB=ON  PLU=ON  ?RETINOIC?/CNS AND ?ACID?/CNS
L5            28 SEA ABB=ON  PLU=ON  L4 AND 24/C AND 2/O
L6             4 SEA ABB=ON  PLU=ON  L5 AND 34/H
                 D SCAN
                 E RETINOIC ACID/CN
L7             1 SEA ABB=ON  PLU=ON  L4 AND (?TERT?(W)BUTYL?)/CNS
                 D SCAN
                 E  "RETINOIC ACID, 1-METHYLETHYL ESTER"/CN
L8             1 SEA ABB=ON  PLU=ON  "RETINOIC ACID, 1-METHYLETHYL ESTER"/CN
                 D SCAN
                 E C23H34O2/MF
L9             9 SEA ABB=ON  PLU=ON  L4 AND (C23H34O2/MF)
                 D SCAN

     FILE 'STNGUIDE' ENTERED AT 09:11:49 ON 18 DEC 2007

     FILE 'REGISTRY' ENTERED AT 09:12:43 ON 18 DEC 2007
                 E RETINOIC ACID/CN
L10            1 SEA ABB=ON  PLU=ON  "RETINOIC ACID"/CN
                 D SCAN
                 D SCAN L3
                 D RN

     FILE 'LREGISTRY' ENTERED AT 09:15:46 ON 18 DEC 2007
L11              STR  302-79-4

     FILE 'REGISTRY' ENTERED AT 09:24:35 ON 18 DEC 2007
L12            0 SEA SSS SAM L11
L13            0 SEA SSS FUL L11

     FILE 'LREGISTRY' ENTERED AT 09:25:27 ON 18 DEC 2007
L14              STR L11
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```
     FILE 'REGISTRY' ENTERED AT 09:27:43 ON 18 DEC 2007
L15           0 SEA SSS SAM L14
L16           0 SEA SSS FUL L14

     FILE 'STNGUIDE' ENTERED AT 09:28:45 ON 18 DEC 2007

     FILE 'REGISTRY' ENTERED AT 09:35:03 ON 18 DEC 2007
L17           0 SEA ABB=ON  PLU=ON  L13 OR L16

     FILE 'HCAPLUS' ENTERED AT 09:35:19 ON 18 DEC 2007
L18           0 SEA ABB=ON  PLU=ON  L17
                D QUE STAT L18
                E DELUCA HECTOR F/AU
L19         956 SEA ABB=ON  PLU=ON  ("DELUCA HECTOR"/AU OR  "DELUCA HECTOR
                F"/AU OR "DELUCA HECTOR FLOYD"/AU)
                E CLAGETT DAME MARGARET/AU
L20         101 SEA ABB=ON  PLU=ON  ("CLAGETT DAME M"/AU OR "CLAGETT DAME
                MARGARET"/AU)
                E GOWLUGARI SUMITHRA/AU
L21          16 SEA ABB=ON  PLU=ON  "GOWLUGARI SUMITHRA"/AU
L22          59 SEA ABB=ON  PLU=ON  L19 AND ((L20 OR L21))
L23           6 SEA ABB=ON  PLU=ON  L20 AND L21
L24          59 SEA ABB=ON  PLU=ON  L22 OR L23
L25           7 SEA ABB=ON  PLU=ON  L24 AND RETINOID
L26           7 SEA ABB=ON  PLU=ON  L24 AND ?RETINOI?
L27           7 SEA ABB=ON  PLU=ON  L25 OR L26
L28          32 SEA ABB=ON  PLU=ON  L24 AND PHARMA?
L29          38 SEA ABB=ON  PLU=ON  L27 OR L28
L30      170099 SEA ABB=ON  PLU=ON  DERM? OR EPIDERM? OR SKIN(W)(DISEASE? OR
                DISORDER?) OR ECZEMA OR KERATOSIS?
L31          30 SEA ABB=ON  PLU=ON  L24 AND L30
L32          35 SEA ABB=ON  PLU=ON  L25 OR L31
                SAVE TEMP L32 QAZ767HCAIN/A

     FILE 'REGISTRY' ENTERED AT 09:49:35 ON 18 DEC 2007
                SAVE TEMP L13 QAZ767REGL1/A
                SAVE TEMP L16 QAZ767REGL2/A

     FILE 'STNGUIDE' ENTERED AT 09:50:26 ON 18 DEC 2007
                D QUE STAT L18
                D QUE L32

     FILE 'HCAPLUS' ENTERED AT 09:53:29 ON 18 DEC 2007
                D L32 1-35 IBIB AB

     FILE 'STNGUIDE' ENTERED AT 09:53:46 ON 18 DEC 2007
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******* STRUCTURE RESULTS FROM APPLICANT'S WORK *******

=> d l1 ibib ed abs hitstr hitind

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:701816 HCAPLUS Full-text
DOCUMENT NUMBER: 141:200230
TITLE: Esterified retinoid compounds with reduced toxicity, and their therapeutic use
INVENTOR(S): Deluca, Hector F.; Clagett-Dame, Margaret; Gowlugari, Sumithra
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004167215	A1	20040826	US 2004-758767		20040116 <--
PRIORITY APPLN. INFO.:			US 2003-440683P	P	20030117
			JP 2003-182782	A	20030626

OTHER SOURCE(S): MARPAT 141:200230
ED Entered STN: 27 Aug 2004
AB A method of minimizing or reducing the toxicity of a retinoid having a free carboxyl group, and the resulting modified retinoids, are described. The method comprises the step of esterifying the carboxyl group of the retinoid with a highly sterically hindered compound, which is preferably a secondary or tertiary alc. The resulting retinoid esters are rendered much less toxic than the starting or parent retinoid. This process provides a retinoid ester analog of reduced toxicity so that it may be administered orally with minimal side effects and with a much greater therapeutic window. The modified retinoid compds. are useful in the treatment and prophylaxis of all diseases and disorders where retinoid compds. have been shown effective. Preparation of e.g. all-trans-retinoic acid tert-Bu ester is included.
IC ICM A61K031-215
INCL 514529000; 554221000
CC 1-12 (Pharmacology)
Section cross-reference(s): 30

=> file reg
FILE 'REGISTRY' ENTERED AT 11:53:33 ON 18 DEC 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 DEC 2007 HIGHEST RN 958449-41-7
DICTIONARY FILE UPDATES: 17 DEC 2007 HIGHEST RN 958449-41-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> d l2 1-38

L2 ANSWER 1 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **742100-24-9** REGISTRY
ED Entered STN: 10 Sep 2004
CN SR 11004 (9CI) (CA INDEX NAME)
ENTE A retinoid
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **742100-10-3** REGISTRY
ED Entered STN: 10 Sep 2004
CN BMS 188970 (9CI) (CA INDEX NAME)
ENTE A retinoid
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **742099-97-4** REGISTRY
ED Entered STN: 10 Sep 2004
CN LDG 100568 (9CI) (CA INDEX NAME)
ENTE A retinoid
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

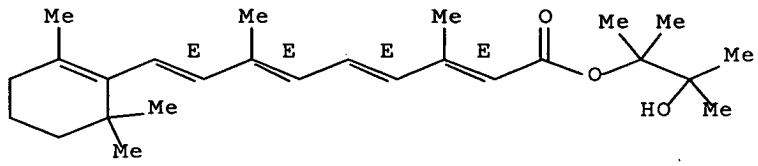
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **742099-81-6** REGISTRY
ED Entered STN: 10 Sep 2004
CN LDG 100268 (9CI) (CA INDEX NAME)
ENTE A retinoid
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **730961-06-5** REGISTRY
ED Entered STN: 23 Aug 2004
CN Retinoic acid, 2-hydroxy-1,1,2-trimethylpropyl ester (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H40 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **403850-48-6** REGISTRY
ED Entered STN: 03 Apr 2002
CN UAB 8 (9CI) (CA INDEX NAME)
ENTE A retinoid (UAB Research)
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
5 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **186912-91-4** REGISTRY
ED Entered STN: 11 Mar 1997
CN Ro 48-2249 (9CI) (CA INDEX NAME)
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

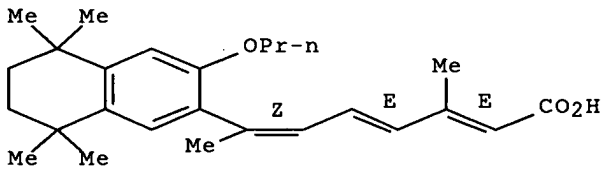
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
10 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
10 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **186912-90-3** REGISTRY
ED Entered STN: 11 Mar 1997
CN Ro 44-4753 (9CI) (CA INDEX NAME)
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
11 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 9 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **180713-37-5** REGISTRY
ED Entered STN: 13 Sep 1996
CN 2,4,6-Octatrienoic acid, 3-methyl-7-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-propoxy-2-naphthalenyl)-, (2E,4E,6Z)- (CA INDEX NAME)
OTHER NAMES:
CN CD 3159
CN LG 100754
CN LGD 100754
FS STEREOSEARCH
MF C26 H36 O3
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, IMSDRUGNEWS, IMSRESEARCH, PHAR, PROUSDDR, TOXCENTER, USPAT2, USPATFULL

Double bond geometry as shown.

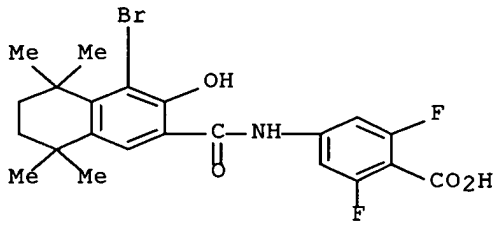


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
27 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 10 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **179045-64-8** REGISTRY
ED Entered STN: 01 Aug 1996
CN Benzoic acid, 4-[[(4-bromo-5,6,7,8-tetrahydro-3-hydroxy-5,5,8,8-tetramethyl-2-naphthalenyl)carbonyl]amino]-2,6-difluoro- (CA INDEX NAME)
OTHER NAMES:
CN AGN 193836
MF C22 H22 Br F2 N O4
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, CA, CAPLUS, PHAR, PROUSDDR, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

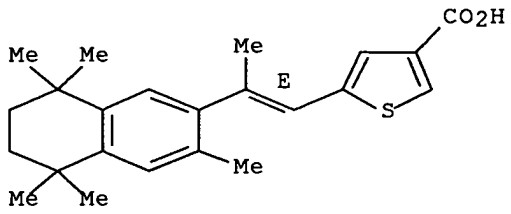
L2 ANSWER 11 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **174546-47-5** REGISTRY
ED Entered STN: 27 Mar 1996
CN Ro 25-7386 (9CI) (CA INDEX NAME)
DR 446880-22-4
ENTE A retinoid X receptor selective agonist (Hoffmann-LaRoche, Switzerland)
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
15 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 12 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **156691-84-8** REGISTRY
ED Entered STN: 29 Jul 1994
CN 3-Thiophenecarboxylic acid, 5-[(1E)-2-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)-1-propenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Thiophenecarboxylic acid, 5-[2-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)-1-propenyl]-, (E)-

OTHER NAMES:
CN AGN 190701
CN AGN 191701
CN CD 2425
FS STEREOSEARCH
MF C23 H28 O2 S
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, CA, CAPLUS, CASREACT, MEDLINE, PHAR, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

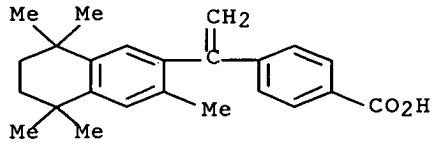
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

35 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
35 REFERENCES IN FILE CAPLUS (1907 TO DATE)

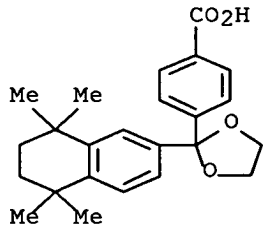
L2 ANSWER 13 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **153559-49-0** REGISTRY
ED Entered STN: 10 Mar 1994
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)ethenyl]- (CA INDEX NAME)
OTHER NAMES:
CN Bexarotene
CN LG 100069
CN LG 1069
CN LG 69
CN LG 69 (retinoid)
CN LGD 1069
CN RO 26-4455
CN SR 11247
CN Targret
CN Targretin
CN Targretyn
CN Targrexin
MF C24 H28 O2
CI COM
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CIN, CSCHEM, EMBASE, HSDB*, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MRCK*, PATDPASPC, PHAR, PROMT, PROUSDDR, PS, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

298 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
298 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 14 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **146670-40-8** REGISTRY
ED Entered STN: 26 Mar 1993
CN Benzoic acid, 4-[2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1,3-dioxolan-2-yl]- (CA INDEX NAME)
OTHER NAMES:
CN BMS 188649
CN SR 11237
MF C24 H28 O4
CI COM
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, MEDLINE, PROUSDDR, TOXCENTER, USPAT2, USPATFULL

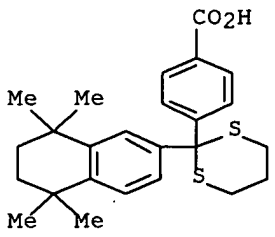


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

63 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
63 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 15 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **146670-36-2** REGISTRY
ED Entered STN: 26 Mar 1993
CN Benzoic acid, 4-[2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1,3-dithian-2-yl]- (CA INDEX NAME)

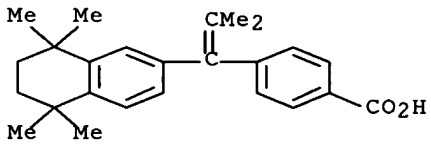
OTHER NAMES:
CN SR 11203
MF C25 H30 O2 S2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
21 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 16 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **146670-35-1** REGISTRY
ED Entered STN: 26 Mar 1993
CN Benzoic acid, 4-[2-methyl-1-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propenyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN MM 11217
CN SR 11217
MF C25 H30 O2
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, EMBASE, MEDLINE, TOXCENTER, USPAT2, USPATFULL

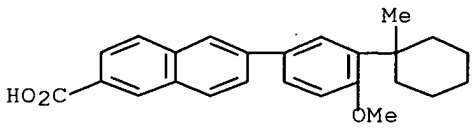


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

35 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
35 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 17 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **143984-56-9** REGISTRY
ED Entered STN: 16 Oct 1992

CN 2-Naphthalenecarboxylic acid, 6-[4-methoxy-3-(1-methylcyclohexyl)phenyl]- (CA INDEX NAME)
OTHER NAMES:
CN CD 2019
MF C25 H26 O3
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

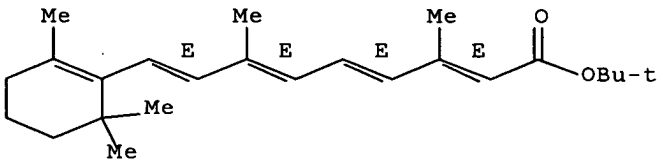


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
27 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 18 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **140939-20-4** REGISTRY
ED Entered STN: 01 May 1992
CN Retinoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)
OTHER NAMES:
CN tert-Butyl retinoate
FS STEREOSEARCH
MF C24 H36 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL

Double bond geometry as shown.

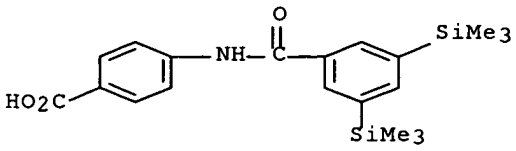


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 19 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **125973-56-0** REGISTRY
ED Entered STN: 23 Mar 1990
CN Benzoic acid, 4-[[3,5-bis(trimethylsilyl)benzoyl]amino]- (CA INDEX NAME)

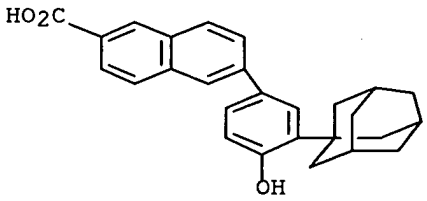
OTHER NAMES:
CN Am 555S
CN TAC 101
MF C20 H27 N O3 Si2
SR CA
LC STN Files: ADISINSIGHT, BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CIN, IMSDRUGNEWS, IMSRESEARCH, IPA, PHAR, PROUSDDR, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

48 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
48 REFERENCES IN FILE CAPLUS (1907 TO DATE)

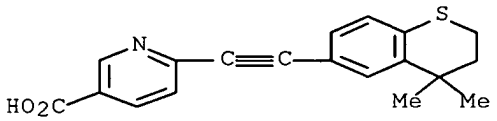
L2 ANSWER 20 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **125316-60-1** REGISTRY
ED Entered STN: 09 Feb 1990
CN 2-Naphthalenecarboxylic acid, 6-(4-hydroxy-3-tricyclo[3.3.1.13,7]dec-1-ylphenyl)- (CA INDEX NAME)
OTHER NAMES:
CN 6-[3-(1-Adamantyl)-4-hydroxyphenyl]-2-naphthalenecarboxylic acid
CN AHPN
CN CD 437
CN CD 437/AHPN
MF C27 H26 O3
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, EMBASE, PHAR, PROUSDDR, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

161 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
161 REFERENCES IN FILE CAPLUS (1907 TO DATE)

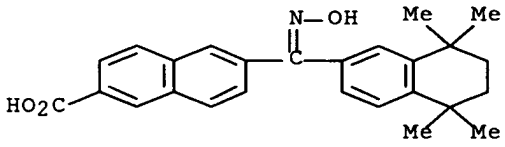
L2 ANSWER 21 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **118292-41-4** REGISTRY
ED Entered STN: 06 Jan 1989
CN 3-Pyridinecarboxylic acid, 6-[2-(3,4-dihydro-4,4-dimethyl-2H-1-benzothiopyran-6-yl)ethynyl]- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1-Benzothiopyran, 3-pyridinecarboxylic acid deriv.
CN 3-Pyridinecarboxylic acid, 6-[(3,4-dihydro-4,4-dimethyl-2H-1-benzothiopyran-6-yl)ethynyl]- (9CI)
OTHER NAMES:
CN AGN 190299
CN Tazarotenic acid
MF C19 H17 N O2 S
CI COM
SR CA
LC STN Files: ADISNEWS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, IPA, MEDLINE, PROUSDDR, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

42 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
42 REFERENCES IN FILE CAPLUS (1907 TO DATE)

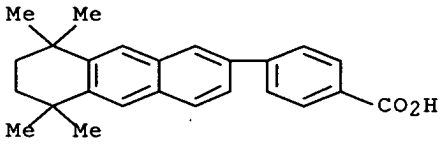
L2 ANSWER 22 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **110952-22-2** REGISTRY
ED Entered STN: 24 Oct 1987
CN 2-Naphthalenecarboxylic acid, 6-[(hydroxyimino)(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)methyl]- (CA INDEX NAME)
OTHER NAMES:
CN BMS 185354
CN SR 11254
MF C26 H27 N O3
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1907 TO DATE)

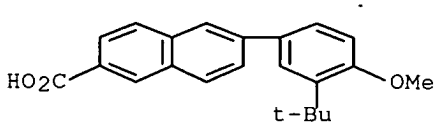
L2 ANSWER 23 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **107430-51-3** REGISTRY
ED Entered STN: 04 Apr 1987
CN Benzoic acid, 4-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-anthracenyl)-
(CA INDEX NAME)
OTHER NAMES:
CN AGN 191312
CN CD 367
CN SR 3961
CN SRI 6751-84
CN TTAB
MF C25 H26 O2
SR CA
LC STN Files: AQUIRE, BEILSTEIN*, BIOTECHNO, CA, CAPLUS, CASREACT, EMBASE,
MEDLINE, PIRA, PROMT, PROUSDDR, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

69 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
69 REFERENCES IN FILE CAPLUS (1907 TO DATE)

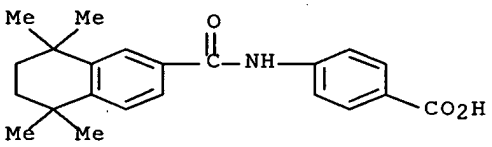
L2 ANSWER 24 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **106685-58-9** REGISTRY
ED Entered STN: 21 Feb 1987
CN 2-Naphthalenecarboxylic acid, 6-[3-(1,1-dimethylethyl)-4-methoxyphenyl]-
(CA INDEX NAME)
OTHER NAMES:
CN CD 417
MF C22 H22 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 25 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **102121-60-8** REGISTRY
ED Entered STN: 17 May 1986
CN Benzoic acid, 4-[[(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)carbonyl]amino]- (CA INDEX NAME)
OTHER NAMES:
CN Am 580
CN CD 336
CN NSC 608001
CN Ro 40-6055
MF C22 H25 N O3
SR CA
LC STN Files: ADISINSIGHT, AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, EMBASE, IMSDRUGNEWS, IMSRESEARCH, MEDLINE, PROUSDDR, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

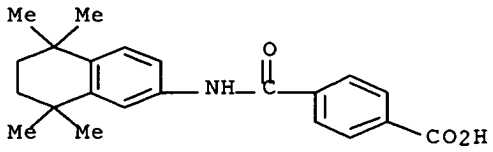
176 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
176 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 26 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **94497-51-5** REGISTRY
ED Entered STN: 26 Jan 1985
CN Benzoic acid, 4-[[(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)amino]carbonyl]- (CA INDEX NAME)
OTHER NAMES:
CN Am 80
CN Am 80 (pharmaceutical)
CN Amnolake
CN NSC 608000
CN Retinoid AM 80
CN Tamibarotene
MF C22 H25 N O3
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, DDFU, DRUGU,

EMBASE, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, PHAR, PROMT, PROUSDDR, RTECS*, SCISEARCH, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: WHO

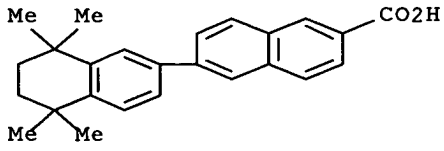


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

176 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
176 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 27 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **86471-16-1** REGISTRY
ED Entered STN: 16 Nov 1984
CN [2,2'-Binaphthalene]-6-carboxylic acid, 5',6',7',8'-tetrahydro-5',5',8',8'-tetramethyl- (CA INDEX NAME)
OTHER NAMES:
CN AGN 191650
CN Ro 19-0645
CN SR 3957
CN SRI 5898-52
CN SRI 5898-71
CN TTNN
MF C25 H26 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, MEDLINE, PHAR, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)



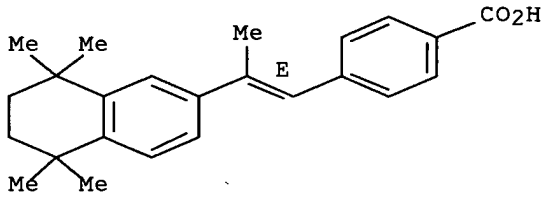
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

68 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
68 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 28 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **71441-28-6** REGISTRY

ED Entered STN: 16 Nov 1984
CN Benzoic acid, 4-[(1E)-2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propen-1-yl]- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[(1E)-2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propenyl]- (9CI)
CN Benzoic acid, 4-[2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propenyl]-, (E)-
OTHER NAMES:
CN AGN 191183
CN Arotinoid acid
CN Arotinoid free acid
CN Ro 13-7410
CN TTNPB
FS STEREOSEARCH
DR 111035-66-6
MF C24 H28 O2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

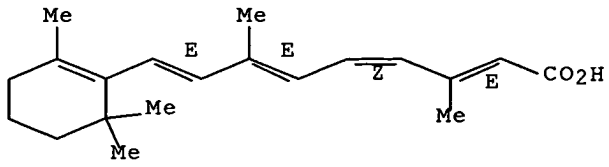


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

323 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
323 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 29 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **68070-35-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid, 11-cis- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 11-cis-Retinoic acid
FS STEREOSEARCH
DR 69686-72-2
MF C20 H28 O2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, CHEMINFORMRX, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

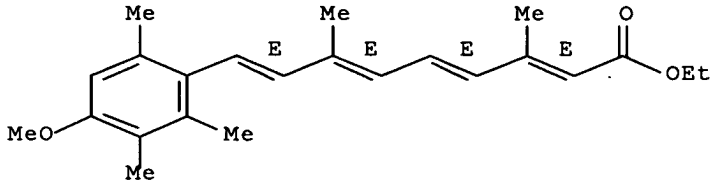


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

29 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
29 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 30 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **54350-48-0** REGISTRY
ED Entered STN: 16 Nov 1984
CN 2,4,6,8-Nonatetraenoic acid, 9-(4-methoxy-2,3,6-trimethylphenyl)-3,7-dimethyl-, ethyl ester, (2E,4E,6E,8E)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2,4,6,8-Nonatetraenoic acid, 9-(4-methoxy-2,3,6-trimethylphenyl)-3,7-dimethyl-, ethyl ester, (all-E)-
OTHER NAMES:
CN Ethyl all-trans-9-(4-methoxy-2,3,6-trimethylphenyl)-3,7-dimethyl-2,4,6,8-nonatetraenoate
CN Ethyl etrinoate
CN Etretinate
CN Ro 10-9359
CN Tegison
CN Tigason
CN Tigasone
FS STEREOSEARCH
DR 71833-61-9
MF C23 H30 O3
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSPATENTS, IPA, MEDLINE, MRCK*, MSDS-OHS, PHAR, PROMT, PS, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



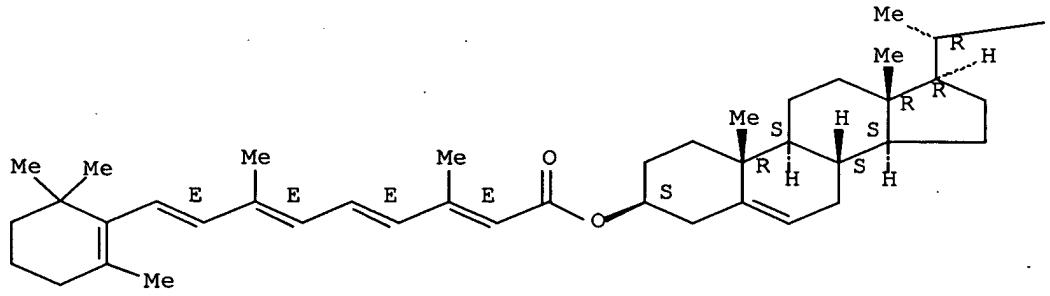
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

560 REFERENCES IN FILE CA (1907 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
560 REFERENCES IN FILE CAPLUS (1907 TO DATE)

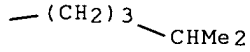
L2 ANSWER 31 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **16409-17-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid, (3β)-cholest-5-en-3-yl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cholestane, retinoic acid deriv.
CN Retinoic acid, cholesteryl ester (8CI)
OTHER NAMES:
CN Cholesterol retinoate
CN Cholesteryl retinoate
CN Retinoyl cholesterol
FS STEREOSEARCH
MF C47 H72 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

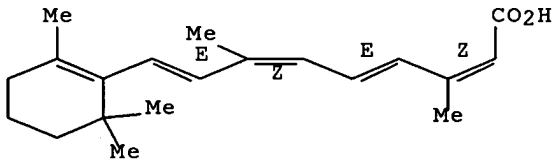


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10 REFERENCES IN FILE CA (1907 TO DATE)
10 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 32 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **5352-74-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid, (9-cis,13-cis)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Retinoic acid, 9-cis,13-cis- (8CI)
OTHER NAMES:
CN 9,13-Di-cis-retinoic acid
CN 9-cis,13-cis-Retinoic acid
FS STEREOSEARCH
MF C20 H28 O2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.



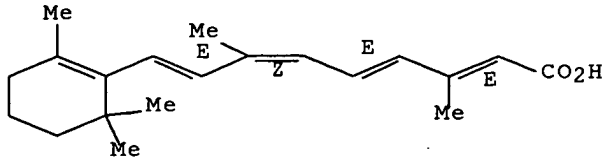
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

58 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
58 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 33 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **5300-03-8** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid, 9-cis- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Retinoic acid, cis-9,trans-13- (8CI)
OTHER NAMES:
CN 9(Z)-Retinoic acid
CN 9-cis-Retinoic acid
CN 9-cis-Tretinoin
CN AGN 192013
CN Alitretinoin
CN ALRT 1057
CN LG 100057
CN LGD 100057
CN LGD 1057
CN NSC 659772
CN Panretin
CN Panretyn
CN Panrexin
FS STEREOSEARCH
MF C20 H28 O2
CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CIN, CSCHEM, EMBASE, HSDB*, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, PATDPASPC, PHAR, PIRA, PROMT, PROUSDDR, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

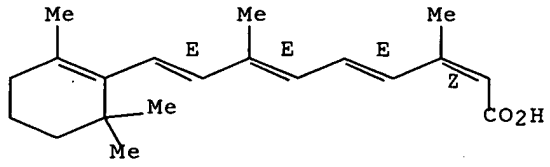


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1582 REFERENCES IN FILE CA (1907 TO DATE)
28 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1584 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 34 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **4759-48-2** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid, 13-cis- (CA INDEX NAME)
OTHER NAMES:
CN (13Z)-Retinoic acid
CN 13-cis-β-Retinoic acid
CN 13-cis-Retinoic acid
CN 13-cis-Vitamin A acid
CN 13-RA
CN Accure
CN Accutane
CN AGN 190013
CN cis-Retinoic acid
CN Isotretinoin
CN Isotrex
CN IsotrexGel
CN Neovitamin A acid
CN Ro 4-3780
CN Roaccutan
CN Roaccutane
FS STEREOSEARCH
MF C20 H28 O2
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IMSPATENTS, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PHAR, PIRA, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH, SPECINFO, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL, USPATOLD, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



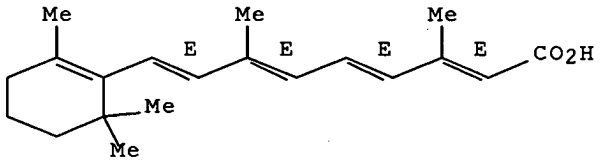
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2122 REFERENCES IN FILE CA (1907 TO DATE)
31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2125 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 35 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **302-79-4** REGISTRY
ED Entered STN: 16 Nov 1984
CN Retinoic acid (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Retinoic acid, all-trans- (8CI)
OTHER NAMES:
CN (all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraenoic acid
CN β-Retinoic acid
CN 2,4,6,8-Nonatetraenoic acid, 3,7-dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-, (all-E)-
CN 3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraenoic acid
CN Aberel
CN AGN 100335
CN Airol
CN Aknoten
CN all-(E)-Retinoic acid
CN all-trans-β-Retinoic acid
CN all-trans-Retinoic acid
CN all-trans-Tretinoin
CN all-trans-Vitamin A acid
CN ATRA
CN Atragen
CN Cordes Vas
CN Dermairol
CN Epi-Aberel
CN Eudyna
CN NSC 122578
CN NSC 122758
CN Renova
CN Retacnyl
CN Retin A
CN Ro 1-5488
CN trans-Retinoic acid
CN Tretin M
CN Tretinoin
CN Vesanoid

CN Vesnaroid
CN Vitamin A acid
CN Vitamin A acid, all-trans-
CN Vitamin A1 acid, all-trans-
FS STEREOSEARCH
DR 7005-78-9, 56573-65-0, 187175-63-9
MF C20 H28 O2
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IMSDRUGNEWS, IMSRESEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PHAR, PIRA, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.

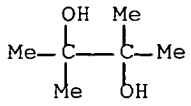


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15852 REFERENCES IN FILE CA (1907 TO DATE)
415 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
15897 REFERENCES IN FILE CAPLUS (1907 TO DATE)
23 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 36 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **76-09-5** REGISTRY
ED Entered STN: 16 Nov 1984
CN 2,3-Butanediol, 2,3-dimethyl- (CA INDEX NAME)
OTHER NAMES:
CN 1,1,2,2-Tetramethylethylene glycol
CN 2,3-Dihydroxy-2,3-dimethylbutane
CN 2,3-Dimethyl-2,3-butanediol
CN 2,3-Dimethyl-2,3-dihydroxybutane
CN NSC 25943
CN Pinacol
CN Pinacone
CN Tetramethylethylene glycol
DR 52400-10-9
MF C6 H14 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MRCK*, NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2,

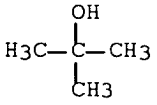
USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1555 REFERENCES IN FILE CA (1907 TO DATE)
63 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1559 REFERENCES IN FILE CAPLUS (1907 TO DATE)
13 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 37 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **75-65-0** REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Propanol, 2-methyl- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN tert-Butyl alcohol (8CI)
OTHER NAMES:
CN 1,1-Dimethylethanol
CN 2-Methyl-2-propanol
CN t-Butanol
CN t-Butanol
CN tert-Butanol
CN Trimethylcarbinol
CN Trimethylmethanol
MF C4 H10 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

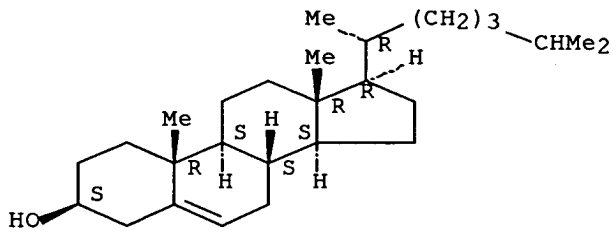


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18842 REFERENCES IN FILE CA (1907 TO DATE)
330 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18888 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 38 OF 38 REGISTRY COPYRIGHT 2007 ACS on STN
RN **57-88-5** REGISTRY
ED Entered STN: 16 Nov 1984
CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cholesterol (8CI)
OTHER NAMES:
CN (-)-Cholesterol
CN Δ5-Cholesten-3β-ol
CN 3β-Hydroxycholest-5-ene
CN 5:6-Cholesten-3β-ol
CN Cholest-5-en-3β-ol
CN Cholesterin
CN Cholesteryl alcohol
CN Dythol
CN Lidinit
CN Lidinite
CN NSC 8798
CN Provitamin D
FS STEREOSEARCH
DR 849593-11-9, 856708-55-9, 732297-95-9, 793670-51-6, 80356-14-5, 80356-33-8, 209124-38-9, 218965-24-3, 262418-13-3, 378185-03-6, 676322-57-9
MF C27 H46 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, RTECS*, SCISEARCH, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

127420 REFERENCES IN FILE CA (1907 TO DATE)
10314 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
127892 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

18,19,21-trinorvitamin D3 as a pharmaceutical
INVENTOR(S): **DeLuca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Barycki, Rafal
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 23pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2007238705	A1	20071011	US 2007-697436		20070406
PRIORITY APPLN. INFO.:			US 2006-744385P	P	20060406

OTHER SOURCE(S): MARPAT 147:427589
AB Vitamin D analogs of formula I [X1-X3 = H, protecting group] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, DJ-55 (I, X1 = X2 = X3 = H) was prepared in several steps, and was more active than 1α,25- dihydroxyvitamin D3 in inducing differentiation of HL-60 cells.

L32 ANSWER 3 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1151810 HCAPLUS Full-text
DOCUMENT NUMBER: 147:427588
TITLE: Preparation of 2-substituted-1α,25-dihydroxy-19,26,27-trinorvitamin D analogs as pharmaceuticals
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Grzywacz, Pawel
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 28pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2007238704	A1	20071011	US 2007-697434		20070406
PRIORITY APPLN. INFO.:			US 2006-744386P	P	20060406

OTHER SOURCE(S): MARPAT 147:427588
AB Vitamin D analogs of formula I [X1-X3 = H, protecting group; R1, R2 = H, alkyl] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, RA-7 (I; X1 = X2 = X3 = H, R1 = R2 = Me) was prepared, and was active in inhibiting differentiation of HL-60 cells.

L32 ANSWER 4 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1151807 HCAPLUS Full-text
DOCUMENT NUMBER: 147:427587
TITLE: Preparation of 2-methylene-1α,25-dihydroxy-19,21-dinorvitamin D3 analogs as pharmaceuticals
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Barycki, Rafal
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 21pp.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007238706	A1	20071011	US 2007-697439	20070406
WO 2007118198	A2	20071018	WO 2007-US66154	20070423

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2006-744379P P 20060406
OTHER SOURCE(S): MARPAT 147:427587

AB Vitamin D analogs of formula I [X1-X3 = H, protecting groups] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, DJ-62 (I; X1 = X2 = X3 = H) was prepared in several steps, and was more active than 1α,25- dihydroxyvitamin D3 in inducing differentiation of HL-60 cells.

L32 ANSWER 5 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1151806 HCAPLUS Full-text
DOCUMENT NUMBER: 147:427586
TITLE: Preparation of 2-methylene-1α-hydroxy-18,19,21-trinorvitamin D3 analogs as pharmaceuticals
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Barycki, Rafal
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007238701	A1	20071011	US 2007-697414	20070406

PRIORITY APPLN. INFO.: US 2006-744381P P 20060406
OTHER SOURCE(S): MARPAT 147:427586

AB Vitamin D analogs of formula I [X1, X2 = H, protecting group] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, SX-99 (I; X1 = X2 = H) was prepared in several steps, and was slightly less active than 1α,25-dihydroxyvitamin D3 in inducing differentiation of HL-60 cells.

L32 ANSWER 6 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:907900 HCAPLUS Full-text
DOCUMENT NUMBER: 147:277796
TITLE: Preparation of vitamin D analog RAK as a pharmaceutical
INVENTOR(S): **Deluca, Hector F.**; Chiellini, Grazia; Grzywacz, Pawel; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 24pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007191317	A1	20070816	US 2007-669053	20070130
WO 2007092721	A2	20070816	WO 2007-US61404	20070131
WO 2007092721	A3	20071018		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2006-743219P P 20060202
OTHER SOURCE(S): MARPAT 147:277796

AB Compds. of formula IA or IB are provided where X1, X2 and X3 are independently selected from H or hydroxy protecting groups and R1 is selected from straight or branched chain alkyl groups having from 1 to 8 carbon atoms; straight or branched chain alkenyl groups having from 2 to 8 carbon atoms; straight or branched chain hydroxy-substituted alkyl groups having from 1 to 8 carbon atoms; straight and branched chain hydroxy-substituted alkenyl groups having from 2 to 8 carbon atoms. Compds. of formula I [X1-X3 = H, protecting groups; R1 = alkyl, etc.] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, RAK (I; X1 = X2 = X3 = H, R1 = Me, 20R) was prepared in several steps, and has comparable binding activity to the vitamin D receptor to 1α,25-dihydroxyvitamin D3.

L32 ANSWER 7 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:907896 HCAPLUS Full-text
DOCUMENT NUMBER: 147:277795
TITLE: Preparation of vitamin D analog NEL as a pharmaceutical
INVENTOR(S): **Deluca, Hector F.**; Chiellini, Grazia; Grzywacz, Pawel; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 24pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007191316	A1	20070816	US 2007-669029	20070130
WO 2007092720	A2	20070816	WO 2007-US61402	20070131
WO 2007092720	A3	20071018		

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2006-743217P P 20060202
OTHER SOURCE(S): MARPAT 147:277795

AB Compds. of formula I [X1, X2, X3 = H, protecting groups; R1 = alkyl, etc.] are prepared Such compds. are used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, NEL (I; X1 = X2 = X3 = H, R1 = Me, 20R) was prepared in several steps, and is more active in binding to the vitamin D receptor than 1α,25-dihydroxyvitamin D3.

L32 ANSWER 8 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:332986 HCAPLUS Full-text
DOCUMENT NUMBER: 146:309874
TITLE: Preparation of 19-nor analogs of 1α,25-dihydroxyvitamin D3 for therapeutic use
INVENTOR(S): **Deluca, Hector F.**; Grzywacz, Pawel; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 16pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007066566	A1	20070322	US 2006-523750	20060919
WO 2007038094	A1	20070405	WO 2006-US36509	20060919

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,

KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.: US 2005-719374P P 20050922
OTHER SOURCE(S): MARPAT 146:309874

AB The invention provides 19-nor analogs of 1α,25-dihydroxyvitamin D3 that have a shortened side chain such as 19,23,24,25,26,27-hexanor- 1α-hydroxyvitamin D3 and analogs thereof, pharmaceutical formulations or medicaments that include the compds., and the use of these compds. or mixts. thereof in therapy and in the preparation of medicaments for use in treating various disease states. Synthetic procedures for the compds. of the invention are exemplified. The compds. were found to exhibit desired, and highly advantageous, patterns of biol. activity with respect to intestinal calcium transport activity, ability to mobilize calcium from bone, and ability to bind to the vitamin D receptor. The compds. are also found to moderate cell differentiation activity.

L32 ANSWER 9 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:259536 HCAPLUS Full-text
DOCUMENT NUMBER: 146:296132
TITLE: Preparation of des-C,D analogs of 1α,25-dihydroxy-19-norvitamin D3 as pharmaceuticals
INVENTOR(S): **Deluca, Hector F.**; Plonska-Ocypa, Katarzyna; Sicinski, Rafal; Grzywacz, Pawel; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 51pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007028000	A2	20070308	WO 2006-US34196	20060830
WO 2007028000	A3	20071122		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

US 2007112077	A1	20070517	US 2006-512705	20060830

PRIORITY APPLN. INFO.: US 2005-712365P P 20050830
OTHER SOURCE(S): MARPAT 146:296132

AB Des-C,D 2-methylene-19-norvitamin D3 analogs of formula I [R1 = straight or branched chain alkyl or alkylene with OY3 group; Y1, Y2, Y3 = H, protecting group] are prepared Such compds. may be used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, II was prepared, and had EC50 value of 3x10-7 M against HL-60 cells.

L32 ANSWER 10 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1176697 HCAPLUS Full-text

DOCUMENT NUMBER: 145:489453
TITLE: Preparation of 19,26,27-trinor-1α,25-dihydroxyvitamin D3 compounds for pharmaceutical use
INVENTOR(S): **Deluca, Hector F.**; Grzywacz, Pawel; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 54pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006119309	A2	20061109	WO 2006-US16875	20060502
WO 2006119309	A3	20070405		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
AU 2006242184	A1	20061109	AU 2006-242184	20060502
US 2006264410	A1	20061123	US 2006-416401	20060502
US 7241909	B2	20070710		
US 2007219168	A1	20070920	US 2007-756333	20070531

PRIORITY APPLN. INFO.:
US 2005-677232P P 20050503
US 2006-416401 A1 20060502
WO 2006-US16875 W 20060502

OTHER SOURCE(S): MARPAT 145:489453

AB Trinordihydroxyvitamin D3 derivs. of formula I [X1, X2, X3 = H, protecting group; R1, R2 = H, alkyl; R1R2 = (substituted) CH2] are prepared Such compds. may be used in preparing pharmaceutical compns. and are useful in treating a variety of conditions where a rise in serum calcium is undesirable. Thus, II was prepared, and was more active than 1α,25-dihydroxyvitamin D3 in binding to the vitamin D receptor, and had no calcemic activity.

L32 ANSWER 11 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1041361 HCAPLUS Full-text
DOCUMENT NUMBER: 145:377501
TITLE: Preparation of (23R)- and (23S)-2-methylene-19-nor-25-dehydro-1α-hydroxyvitamin D3 23,26-lactones for therapeutic use as vitamin D receptor modulators
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Chiellini, Grazia; Grzywacz, Pawel
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 48pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2006105221	A1	20061005	WO 2006-US11508		20060328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
AU 2006230296	A1	20061005	AU 2006-230296		20060328
US 2006223782	A1	20061005	US 2006-390999		20060328
US 7235680	B2	20070626			
US 2007259953	A1	20071108	US 2007-767085		20070622
PRIORITY APPLN. INFO.:			US 2005-666129P	P	20050329
			US 2006-390999	A1	20060328
			WO 2006-US11508	W	20060328

OTHER SOURCE(S): MARPAT 145:377501

AB The title lactones, (23R)- and (23S)-I (R = β-H, α-H, resp.), were prepared for use in pharmaceutical compns. Such compds. may be used in preparing pharmaceutical compns. and are useful in treating a variety of disorders, such as **eczema**, asthma, hypercalcemia, sarcoidosis and vitamin D intoxication.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 12 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:823464 HCAPLUS Full-text
DOCUMENT NUMBER: 145:249396
TITLE: Preparation of 2-methylene-19-nor-(20S-24-epi)-1α,25-dihydroxyvitamin-D2 for pharmaceutical use
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 33pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006086608	A1	20060817	WO 2006-US4679	20060210
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,				

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

AU 2006213722	A1	20060817	AU 2006-213722	20060210
CA 2597568	A1	20060817	CA 2006-2597568	20060210
US 2006183721	A1	20060817	US 2006-351874	20060210
EP 1848442	A1	20071031	EP 2006-734708	20060210

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.: US 2005-652044P P 20050211
WO 2006-US4679 W 20060210

OTHER SOURCE(S): MARPAT 145:249396

AB Compds. of formula I are provided [X1, X2, X3 = H, hydroxy protecting group]. Such compds. may be used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, I (X1 = X2 = X3 = H) was prepared, and was shown to have HL-60 differentiation activity.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 13 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:823463 HCAPLUS Full-text
DOCUMENT NUMBER: 145:249395
TITLE: Preparation of 2-methylene-19-nor-(20S-24S)-1α,25-dihydroxyvitamin D2 for pharmaceutical use
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006086613	A2	20060817	WO 2006-US4699	20060210
WO 2006086613	A3	20061109		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

AU 2006213727	A1	20060817	AU 2006-213727	20060210
CA 2597624	A1	20060817	CA 2006-2597624	20060210
US 2006183716	A1	20060817	US 2006-352454	20060210
EP 1853274	A2	20071114	EP 2006-720601	20060210

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.: US 2005-652473P P 20050211
WO 2006-US4699 W 20060210

OTHER SOURCE(S): MARPAT 145:249395

AB Compds. of formula I are provided [X1, X2, X3 = H, hydroxy protecting group]. Such compds. may be used in preparing pharmaceutical compns. and are useful in treating a variety of biol. conditions. Thus, I (X1 = X2 = X3 = H) was prepared, and showed HL-60 differentiation activity.

L32 ANSWER 14 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:511308 HCAPLUS Full-text
DOCUMENT NUMBER: 145:28170
TITLE: Synthesis of 2α-methyl-19-nor-1α-hydroxy-homopregnacalciferol and pharmaceutical uses
INVENTOR(S): **Deluca, Hector F.**; Sicinski, Rafal R.; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057902	A2	20060601	WO 2005-US41821	20051118
WO 2006057902	A3	20060713		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309807	A1	20060601	AU 2005-309807	20051118
CA 2588412	A1	20060601	CA 2005-2588412	20051118
US 2006148759	A1	20060706	US 2005-283261	20051118
EP 1838667	A2	20071003	EP 2005-851806	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				

PRIORITY APPLN. INFO.: US 2004-630181P P 20041122
WO 2005-US41821 W 20051118
OTHER SOURCE(S): CASREACT 145:28170; MARPAT 145:28170

AB This invention discloses 2α-methyl-19-nor-vitamin D analogs I (X1, X2 = H, hydroxy-protecting group), specifically 2α-methyl-19-nor- 1α-hydroxy-homopregnacalciferol (II), and pharmaceutical uses therefor. Thus, reacting 2-methylene-19-nor-1α-hydroxy- homopregnacalciferol with (Ph3P)3RhCl/H2 in benzene gave II along with its 2β-isomer. II exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. II also has little, if any, calcemic activity and therefore may be used to treat autoimmune disorders or inflammatory diseases in humans as well as renal osteodystrophy. This compound may also be used for the treatment or prevention of obesity.

L32 ANSWER 15 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510577 HCAPLUS Full-text
DOCUMENT NUMBER: 145:8318
TITLE: Preparation of 2α-methyl and 2β-methyl analogs of 19,26,27-trinor-(20S)-1α-hydroxyvitamin D3 and their uses
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; Grzywacz, Pawel K.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057884	A2	20060601	WO 2005-US41669	20051118
WO 2006057884	A3	20061005		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309789	A1	20060601	AU 2005-309789	20051118
CA 2588406	A1	20060601	CA 2005-2588406	20051118
US 2006116352	A1	20060601	US 2005-283124	20051118
US 7241749	B2	20070710		
EP 1824818	A2	20070829	EP 2005-826287	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
US 2007270391	A1	20071122	US 2007-775042	20070709

PRIORITY APPLN. INFO.:
US 2004-630183P P 20041122
US 2005-283124 A1 20051118
WO 2005-US41669 W 20051118

OTHER SOURCE(S): CASREACT 145:8318; MARPAT 145:8318

AB This invention discloses 2α-Me and 2β-Me analogs of 19,26,27-trinor-(20S)-1α-hydroxyvitamin D3 I (X1, X2 = H, hydroxy protecting group) and pharmaceutical uses therefor. These compds. exhibit pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. These compds. also have little, if any, calcemic activity and therefore may be used to treat autoimmune disorders or inflammatory diseases in humans as well as renal osteodystrophy. These compds. may also be used for the treatment or prevention of obesity.

L32 ANSWER 16 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510476 HCAPLUS Full-text
DOCUMENT NUMBER: 145:8316
TITLE: Preparation of 2-methylene-19,21-dinor-1α-hydroxybishomopregnacalciferol for use in pharmaceutical compositions
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057915	A2	20060601	WO 2005-US41888	20051118
WO 2006057915	A3	20060713		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309820	A1	20060601	AU 2005-309820	20051118
CA 2588063	A1	20060601	CA 2005-2588063	20051118
US 2006135800	A1	20060622	US 2005-283541	20051118
EP 1827452	A2	20070905	EP 2005-849207	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				

PRIORITY APPLN. INFO.: US 2004-629958P P 20041122
WO 2005-US41888 W 20051118

OTHER SOURCE(S): CASREACT 145:8316; MARPAT 145:8316

AB The title compound I (R = R1 = H) and its derivs., such as I [R, R1 = hydroxyl protecting group], were prepared for therapeutic use in the treatment of diseases and conditions involving vitamin D receptor (VDR) activity. These pregnacalciferol derivs. were claimed for use in the treatment of cancer, as well as in the treatment autoimmune, inflammatory, bone and **skin diseases** and conditions. The diseases and conditions that may be treated using these compds. include leukemia, colon cancer, breast cancer, prostate cancer, psoriasis, multiple sclerosis, lupus, diabetes mellitus, host vs. graft reaction, rejection of organ transplants, rheumatoid arthritis, asthma, inflammatory bowel diseases, such as celiac disease, ulcerative colitis and Crohn's disease, renal osteodystrophy, osteoporosis, skin wrinkles, lack of adequate skin firmness, lack of adequate **dermal** hydration, or insufficient sebum secretion. Thus, I (R = R1 = H) was prepared via a synthetic sequence starting from (3aR,4S,7aS)-octahydro-7a-methyl-1-propylidene-1H-inden-4-ol and [2-[(3R,5R)-3,5-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-4-methylenecyclohexylidene]ethyl]diphenylphosphine oxide. The prepared compds. were assayed for VDR binding activity, for effect on HL-60 cell differentiation, 24-hydroxylase transcription, bone calcium mobilization,

intestinal calcium transport, hypercalcemia and parathyroid hormone suppression.

L32 ANSWER 17 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510463 HCAPLUS Full-text
DOCUMENT NUMBER: 145:28164
TITLE: Preparation of 2-methylene-18,19-dinor-1α-hydroxyhomopregnacalciferol for use in pharmaceutical compositions
INVENTOR(S): **Deluca, Hector F.**; Barycki, Rafal; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057932	A2	20060601	WO 2005-US42030	20051118
WO 2006057932	A3	20060803		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309747	A1	20060601	AU 2005-309747	20051118
CA 2588417	A1	20060601	CA 2005-2588417	20051118
US 2006122157	A1	20060608	US 2005-283222	20051118
US 7238681	B2	20070703		
EP 1817278	A2	20070815	EP 2005-848578	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				

PRIORITY APPLN. INFO.: US 2004-630182P P 20041122
WO 2005-US42030 W 20051118
OTHER SOURCE(S): CASREACT 145:28164; MARPAT 145:28164

AB The title compound I (R = R1 = H) and its derivs., such as I [R, R1 = hydroxyl protecting group], were prepared for therapeutic use in the treatment of diseases and conditions involving vitamin D receptor (VDR) activity. I (R = R1 = H) exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. I (R = R1 = H) also has little, if any, calcemic activity and therefore may be used to treat autoimmune disorders or inflammatory diseases in humans as well as renal osteodystrophy. I (R = R1 = H) may also be used for the treatment or prevention of obesity. Thus, I (R = R1 = H) was prepared via a synthetic sequence starting from vitamin D2 and [2-[(3R,5R)-3,5-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]- 4-methylenecyclohexylidene]ethyl]diphenylphosphine oxide. The prepared compds.

were assayed for VDR binding activity, for effect on HL-60 cell differentiation, 24-hydroxylase transcription, bone calcium mobilization, intestinal calcium transport, hypercalcemia and parathyroid hormone suppression.

L32 ANSWER 18 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510447 HCAPLUS Full-text
DOCUMENT NUMBER: 145:28169
TITLE: Preparation of 2-methylene-19,26,27-trinor-(20S)-1α-hydroxyvitamin-D3 for use in pharmaceutical compositions
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; Grzywacz, Pawel K.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057886	A2	20060601	WO 2005-US41671	20051118
WO 2006057886	A3	20060629		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309791	A1	20060601	AU 2005-309791	20051118
CA 2588415	A1	20060601	CA 2005-2588415	20051118
US 2006142246	A1	20060629	US 2005-283306	20051118
US 7244719	B2	20070717		
EP 1828113	A2	20070905	EP 2005-849147	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
US 2007249567	A1	20071025	US 2007-775087	20070709
PRIORITY APPLN. INFO.:			US 2004-629965P	P 20041122
			US 2005-283306	A1 20051118
			WO 2005-US41671	W 20051118

OTHER SOURCE(S): CASREACT 145:28169; MARPAT 145:28169

AB The title compound I (R = R1 = H) and its derivs., such as I [R, R1 = hydroxyl protecting group], were prepared for therapeutic use in the treatment of diseases and conditions involving vitamin D receptor (VDR) activity. I (R = R1 = H) exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. I (R = R1 = H) also has little, if any, calcemic activity and therefore may be used to treat autoimmune disorders or inflammatory diseases in humans as well as renal osteodystrophy. I (R = R1

= H) may also be used for the treatment or prevention of obesity. Thus, I (R = R1 = H) was prepared via a synthetic sequence starting from vitamin D2 and [2-[(3R,5R)-3,5-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]- 4-methylenecyclohexylidene]ethyl]diphenylphosphine oxide. The prepared compds. were assayed for VDR binding activity, for effect on HL-60 cell differentiation, 24-hydroxylase transcription, bone calcium mobilization, intestinal calcium transport, hypercalcemia and parathyroid hormone suppression.

L32 ANSWER 19 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510446 HCAPLUS Full-text
DOCUMENT NUMBER: 145:8317
TITLE: Preparation of 2α-methyl-19-nor-(20S)-1α-hydroxy-bishomopregnacalciferol for pharmaceutical use
INVENTOR(S): **Deluca, Hector F.**; Sicinski, Rafal R.; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057899	A2	20060601	WO 2005-US41817	20051118
WO 2006057899	A3	20060706		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309804	A1	20060601	AU 2005-309804	20051118
CA 2588399	A1	20060601	CA 2005-2588399	20051118
US 2006160769	A1	20060720	US 2005-283163	20051118
US 7241751	B2	20070710		
EP 1846369	A2	20071024	EP 2005-851804	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
US 2007254857	A1	20071101	US 2007-775074	20070709

PRIORITY APPLN. INFO.:	US 2004-630184P	P	20041122
	US 2005-283163	A1	20051118
	WO 2005-US41817	W	20051118

OTHER SOURCE(S): CASREACT 145:8317; MARPAT 145:8317

AB 2α-Methyl-19-nor-(20S)-vitamin D analogs of formula I [X1, X2 = H, protecting group] are prepared for pharmaceutical use. Thus, 2α-methyl-19-nor-(20S)-1α-hydroxy-bishomopregnacalciferol (I; X1 = X2 = H) is prepared This compound exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anticancer agent and for the treatment of **skin diseases**

such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. This compound also has little, if any, calcemic activity and therefore may be used to treat autoimmune disorders or inflammatory diseases in humans as well as renal osteodystrophy. This compound may also be used for the treatment or prevention of obesity.

L32 ANSWER 20 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510421 HCAPLUS Full-text
DOCUMENT NUMBER: 145:8315
TITLE: Preparation of 2-methylene-19-nor-(20R)-1α-hydroxybishomopregqnacalciferol for use in pharmaceutical compositions
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057913	A2	20060601	WO 2005-US41886	20051118
WO 2006057913	A3	20061005		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309818	A1	20060601	AU 2005-309818	20051118
CA 2588038	A1	20060601	CA 2005-2588038	20051118
US 2006135799	A1	20060622	US 2005-282972	20051118
EP 1831161	A2	20070912	EP 2005-848203	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				

PRIORITY APPLN. INFO.: US 2004-629954P P 20041122
WO 2005-US41886 W 20051118
OTHER SOURCE(S): CASREACT 145:8315; MARPAT 145:8315

AB The title compound I (R = R1 = H) and its derivs., such as I [R, R1 = hydroxyl protecting group], were prepared for therapeutic use in the treatment of diseases and conditions involving vitamin D receptor (VDR) activity. These pregnacalciferol derivs. were claimed for use in the treatment of cancer, as well as in the treatment autoimmune, inflammatory, bone and **skin diseases** and conditions. The diseases and conditions that may be treated using these compds. include leukemia, colon cancer, breast cancer, prostate cancer, psoriasis, multiple sclerosis, lupus, diabetes mellitus, host vs. graft reaction, rejection of organ transplants, rheumatoid arthritis, asthma, inflammatory bowel diseases, such as celiac disease, ulcerative colitis and Crohn's disease, renal osteodystrophy, osteoporosis, skin wrinkles, lack of adequate skin firmness, lack of adequate **dermal** hydration, or insufficient

sebum secretion. Thus, I (R = R1 = H) was prepared via a synthetic sequence starting from (αS,1R,3aR,7aR)-octahydro-α,7a-dimethyl-4-oxo-1H- indene-1-acetaldehyde and [2-[(3R,5R)-3,5-bis[[(1,1- dimethylethyl)dimethylsilyl]oxy]-4-methylenecyclohexylidene]ethyl]diphenyl phosphine oxide. The prepared compds. were assayed for VDR binding activity, for effect on HL-60 cell differentiation, 24-hydroxylase transcription, bone calcium mobilization, intestinal calcium transport, hypercalcemia and parathyroid hormone suppression.

L32 ANSWER 21 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:510182 HCAPLUS Full-text
DOCUMENT NUMBER: 145:8314
TITLE: Preparation of 2-methylene-19-nor-(20S)-1α-hydroxytrishomopregnacalciferol for use in pharmaceutical compositions
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057914	A2	20060601	WO 2005-US41887	20051118
WO 2006057914	A3	20061005		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005309819	A1	20060601	AU 2005-309819	20051118
CA 2588060	A1	20060601	CA 2005-2588060	20051118
US 2006135798	A1	20060622	US 2005-282304	20051118
EP 1828115	A2	20070905	EP 2005-851832	20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				

PRIORITY APPLN. INFO.: US 2004-629943P P 20041122
WO 2005-US41887 W 20051118

OTHER SOURCE(S): MARPAT 145:8314

AB The title compound I (R = R1 = H) and its derivs., such as I [R, R1 = hydroxyl protecting group], were prepared for therapeutic use in the treatment of diseases and conditions involving vitamin D receptor (VDR) activity. These pregnacalciferol derivs. were claimed for use in the treatment of cancer, as well as in the treatment autoimmune, inflammatory, bone and **skin diseases** and conditions. The diseases and conditions that may be treated using these compds. include leukemia, colon cancer, breast cancer, prostate cancer, psoriasis, multiple sclerosis, lupus, diabetes mellitus, host vs. graft reaction, rejection of organ transplants, rheumatoid arthritis, asthma,

inflammatory bowel diseases, such as celiac disease, ulcerative colitis and Crohn's disease, renal osteodystrophy, osteoporosis, skin wrinkles, lack of adequate skin firmness, lack of adequate **dermal** hydration, or insufficient sebum secretion. Thus, I (R = R1 = H) was prepared via a synthetic sequence starting from (αS,1R,3aR,7aR)-octahydro-α,7a-dimethyl-4-oxo-1H- indene-1-acetaldehyde and [2-[(3R,5R)-3,5-bis[[(1,1- dimethylethyl)dimethylsilyl]oxy]-4-methylenecyclohexylidene]ethyl]diphenyl phosphine oxide. The prepared compds. were assayed for VDR binding activity, for effect on HL-60 cell differentiation, 24-hydroxylase transcription, bone calcium mobilization, intestinal calcium transport, hypercalcemia and parathyroid hormone suppression.

L32 ANSWER 22 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:494224 HCAPLUS Full-text
DOCUMENT NUMBER: 144:488852
TITLE: Preparation of 2-methylene-19-nor-1α-hydroxy-17-ene-homopregnacalciferol for pharmaceutical use
INVENTOR(S): **Deluca, Hector F.**; Tadi, Bulli Padmaja; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006111321	A1	20060525	US 2005-283125	20051118
US 7241750	B2	20070710		
US 2006111330	A1	20060525	US 2005-283291	20051118
US 7241752	B2	20070710		
AU 2005309790	A1	20060601	AU 2005-309790	20051118
AU 2005309805	A1	20060601	AU 2005-309805	20051118
AU 2005309806	A1	20060601	AU 2005-309806	20051118
CA 2588396	A1	20060601	CA 2005-2588396	20051118
CA 2588401	A1	20060601	CA 2005-2588401	20051118
CA 2588410	A1	20060601	CA 2005-2588410	20051118
US 2006116351	A1	20060601	US 2005-283090	20051118
US 7241748	B2	20070710		
WO 2006057885	A2	20060601	WO 2005-US41670	20051118
WO 2006057885	A3	20060629		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
WO 2006057900	A2	20060601	WO 2005-US41819	20051118
WO 2006057900	A3	20060706		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,			

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

WO 2006057901 A2 20060601 WO 2005-US41820 20051118
WO 2006057901 A3 20060713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

EP 1817279 A2 20070815 EP 2005-849730 20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
EP 1828114 A2 20070905 EP 2005-851757 20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
EP 1846370 A2 20071024 EP 2005-851805 20051118
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
US 2007249568 A1 20071025 US 2007-775108 20070709
US 2007249569 A1 20071025 US 2007-775117 20070709
US 2007259838 A1 20071108 US 2007-775061 20070709
PRIORITY APPLN. INFO.: US 2004-630007P P 20041122
US 2005-283090 A1 20051118
US 2005-283125 A1 20051118
US 2005-283291 A1 20051118
WO 2005-US41670 W 20051118
WO 2005-US41819 W 20051118
WO 2005-US41820 W 20051118
OTHER SOURCE(S): CASREACT 144:488852; MARPAT 144:488852

AB 2-Methylene-19-nor-17-ene vitamin D analogs of formula I [X1, X2 = H, protecting group] are prepared Thus, I (X1 = X2 = H) (2-methylene-19-nor- 1α-hydroxy-17-ene-homopregnacalciferol) is prepared starting from ergocalciferol. This compound exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. This compound also has little, if any, calcemic activity and therefore may be used to treat autoimmune disorders and inflammatory diseases in humans as well as renal osteodystrophy. This compound may also be used for the treatment or prevention of obesity.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 23 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:824477 HCAPLUS Full-text

DOCUMENT NUMBER: 143:235403
TITLE: Vitamin D receptor antagonists and their use in treating asthma and other disorders
INVENTOR(S): **Deluca, Hector F.**; Barycki, Rafal; Rivera-Bermudez, Moises A.; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 52 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005182033	A1	20050818	US 2005-59313	20050216
WO 2005079464	A2	20050901	WO 2005-US5084	20050216
WO 2005079464	A3	20060706		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-545347P P 20040217
OTHER SOURCE(S): MARPAT 143:235403

AB Various ester and ketone vitamin D analogs as antagonists of the vitamin D receptor, their preparation and compns. containing them for use in treating conditions such as asthma, **eczema**, hypercalcemia, hyperparathyroidism, sarcoidosis, and intoxication with vitamin D are described. Thus, (22E)-(24R)-25-carbobutoxy-2-methylene-26,27-cyclo-22- dehydro-1α,24-dihydroxy-19-norvitamin D3 (OU-72) was prepared and showed binding to the vitamin D receptor approx. equal to the native hormone. OU-72 was active in stimulating transcription of a reporter gene stably transfected in Ros17/2.8 (bone) cells, indicating significant biol. activity. Furthermore, OU-72 showed antagonistic activity when administered along with the native hormone (1α,25-dihydroxyvitamin D3) in inducing differentiation of HL-60 cells. OU-72 had no calcemic activity when measured either by bone calcium mobilization even when given at the dose of 2900 pmol/day. However, OU-72 did retain the ability to elevate intestinal calcium transport. This compound will find use as an effective therapy for treating asthma, hypercalcemia, **eczema**, hyperparathyroidism, sarcoidosis, and vitamin D intoxication.

L32 ANSWER 24 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:177903 HCAPLUS Full-text
DOCUMENT NUMBER: 142:261688
TITLE: Preparation of 2-methylene-19-norvitamin D2 compounds as therapeutic agents
INVENTOR(S): **Deluca, Hector F.**; Sicinski, Rafal R.; **Gowlugari, Sumithra**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005018658	A1	20050303	WO 2004-US26925	20040818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004266706	A1	20050303	AU 2004-266706	20040818
CA 2535185	A1	20050303	CA 2004-2535185	20040818
US 2005070511	A1	20050331	US 2004-922114	20040818
US 7232810	B2	20070619		
EP 1656157	A1	20060517	EP 2004-781584	20040818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2007502832	T	20070215	JP 2006-524037	20040818
MX 2006PA01248	A	20060920	MX 2006-PA1248	20060131

PRIORITY APPLN. INFO.: US 2003-496415P P 20030820
WO 2004-US26925 W 20040818

OTHER SOURCE(S): CASREACT 142:261688; MARPAT 142:261688

AB 2-Methylene-19-nor-24(S) and 24(R) derivs. of 1α,25-dihydroxyvitamin D2 of formula I [Y1, Y2 = H, protecting group; R = (substituted) OH] are prepared These compds. are characterized by minimal bone calcium mobilization activity and relatively high intestinal calcium transport activity. This results in novel therapeutic agents for the treatment of diseases such as renal osteodystrophy, autoimmune diseases, and osteoporosis. These compds. also exhibit pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as anticancer agents and for use treating **skin diseases** such as psoriasis. Thus, (24R)-1α,25-dihydroxy-2-methylene-19-norvitamin D2 (I; Y1, Y2 = H, R = OH) was prepared, and was more potent than 1α,25- dihydroxyvitamin D3 on HL-60 differentiation.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 25 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:701816 HCAPLUS Full-text
DOCUMENT NUMBER: 141:200230
TITLE: Esterified **retinoid** compounds with reduced toxicity, and their therapeutic use
INVENTOR(S): **Deluca, Hector F.; Clagett-Dame, Margaret; Gowlugari, Sumithra**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004167215	A1	20040826	US 2004-758767		20040116
PRIORITY APPLN. INFO.:			US 2003-440683P	P	20030117
			JP 2003-182782	A	20030626

OTHER SOURCE(S): MARPAT 141:200230

AB A method of minimizing or reducing the toxicity of a **retinoid** having a free carboxyl group, and the resulting modified **retinoids** , are described. The method comprises the step of esterifying the carboxyl group of the **retinoid** with a highly sterically hindered compound, which is preferably a secondary or tertiary alc. The resulting **retinoid** esters are rendered much less toxic than the starting or parent **retinoid**. This process provides a **retinoid** ester analog of reduced toxicity so that it may be administered orally with minimal side effects and with a much greater therapeutic window. The modified **retinoid** compds. are useful in the treatment and prophylaxis of all diseases and disorders where **retinoid** compds. have been shown effective. Preparation of e.g. all-trans-retinoic acid tert-Bu ester is included.

L32 ANSWER 26 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:633908 HCAPLUS Full-text
DOCUMENT NUMBER: 141:157320
TITLE: Preparation of **retinoid** esters with reduced toxicity
INVENTOR(S): **Deluca, Hector F.; Clagett-Dame, Margaret**; Highland, Margaret A.
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004065358	A2	20040805	WO 2004-US1325		20040116
WO 2004065358	A3	20040910			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ					
AU 2004205644	A1	20040805	AU 2004-205644		20040116
CA 2513586	A1	20040805	CA 2004-2513586		20040116
US 2005085539	A1	20050421	US 2004-758794		20040116
US 7126017	B2	20061024			
EP 1585724	A2	20051019	EP 2004-703042		20040116
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
JP 2006517207	T	20060720	JP 2006-501028		20040116
PRIORITY APPLN. INFO.:			US 2003-440779P	P	20030117
			WO 2004-US1325	W	20040116

OTHER SOURCE(S): MARPAT 141:157320

AB A method of minimizing or reducing the toxicity of a **retinoid** having a free carboxyl group is described. The method comprises the step of esterifying the carboxyl group of the **retinoid** with a highly sterically hindered compound, which is preferably an alc. The resulting **retinoid** esters are rendered much less toxic than the starting or parent **retinoid**. This process provides a

retinoid ester analog of reduced toxicity so that it may be administered orally with minimal side effects and with a much greater therapeutic window.

L32 ANSWER 27 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:633453 HCAPLUS Full-text
DOCUMENT NUMBER: 141:151033
TITLE: Modified **retinoid** compounds and their uses
INVENTOR(S): **Deluca, Hector F.; Clagett-Dame, Margaret; Gowlugari, Sumithra**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004064743	A2	20040805	WO 2004-US1324	20040116
WO 2004064743	A3	20041229		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
AU 2004206900	A1	20040805	AU 2004-206900	20040116
CA 2513583	A1	20040805	CA 2004-2513583	20040116
EP 1585723	A2	20051019	EP 2004-703040	20040116
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006516285	T	20060629	JP 2006-501027	20040116
PRIORITY APPLN. INFO.:			US 2003-440683P P	20030117
			WO 2004-US1324 W	20040116

OTHER SOURCE(S): MARPAT 141:151033

AB A method of minimizing or reducing the toxicity of a **retinoid** having a free carboxyl group and the resulting modified **retinoids** are described. The method comprises the step of esterifying the carboxyl group of the **retinoid** with a highly sterically hindered compound, which is preferably a secondary or tertiary alc. The resulting **retinoid** esters are rendered much less toxic than the starting or parent **retinoid**. This process provides a **retinoid** ester analog of reduced toxicity so that it may be administered orally with minimal side effects and with a much greater therapeutic window. The modified **retinoid** compds. are useful in the treatment and prophylaxis of all diseases and disorders where **retinoid** compds. have been shown effective. For example, to a solution of all-trans retinoic acid (atRA, 100 mg, 0.33 mmol) in anhydrous ether was added oxalyl chloride (42.3 mg, 0.333 mmol) at 0° and stirred at that temperature for 30 min; pyridine (28.7 mg, 0.363 mmol) and 2-methyl-2-propanol (26.8 mg, 0.363 mmol) were then added and stirred at room temperature in dark. After reaction was complete, the reaction mixture was quenched with water and extracted with ether, saturated sodium bicarbonate solution, and again with water, dried, and evaporated The thick residue was redissolved in hexane and purified on a silica Sep-Pak cartridge and followed by HPLC. Elution with hexane/ethyl acetate provided all-trans retinoyl tert-Bu ester (I) (98 mg, 82.6%). I given at 83 pmole/day (29.8 μg/day) supported growth of vitamin A-deficient rats over a 5-day period that did not differ significantly from that of the group fed an equal molar amount of atRA (25 μg/day). On the other hand, the animals receiving no vitamin A (vehicle control) continued to lose weight However, átRA at 1 mmole/kg/day (300 mg/kg/day) produced severe acute weight loss over a period of 7 days as well

as other signs of toxicity. In contrast, the same molar amount of I (357 mg/kg/day) enabled continued growth of the animals and revealed no other externally obvious toxicity.

L32 ANSWER 28 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:881371 HCAPLUS Full-text
DOCUMENT NUMBER: 140:39248
TITLE: Isolation and characterization of unsaturated fatty acids as natural ligands for the **retinoid**-X receptor
AUTHOR(S): Goldstein, Jonathan T.; Dobrzyn, Agnieszka; **Clagett-Dame, Margaret**; Pike, J. Wesley; **DeLuca, Hector F.**
CORPORATE SOURCE: Department of Biochemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Archives of Biochemistry and Biophysics (2003), 420(1), 185-193
CODEN: ABBIA4; ISSN: 0003-9861
PUBLISHER: Elsevier Science
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **retinoid**-X receptor (RXR) is a ligand activated nuclear receptor that is the heterodimer partner for many class II nuclear receptors. Previously identified natural ligands for this receptor include 9-cis retinoic acid (9cRA), docosahexaenoic acid, and phytanic acid. Our studies were performed to determine if there are any unidentified, physiol. important RXR ligands. Agonists for RXR were purified from rat heart and testes lipid exts. with the use of a cell-based reporter assay to monitor RXR activation. Purified active fractions contained a variety of unsatd. fatty acids and components were quantified by gas-liquid chromatog. of derivatized samples. The corresponding fatty acid stds. elicited a similar response in the reporter cell assay. Competition binding anal. revealed that the active fatty acids compete with [3H]9cRA for binding to RXR. Non-esterified fatty acids were analyzed from lipid exts. of isolated heart and testes nuclei and endogenous concns. were found to be within the range of their determined binding affinities. Our studies reveal tissue dependent profiles of RXR agonists and support the idea of unsatd. fatty acids as physiol. ligands of RXR.
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 29 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:491175 HCAPLUS Full-text
DOCUMENT NUMBER: 139:53211
TITLE: (20S)-1α-hydroxy-2-methylene-19-nor-bishomopregnacalciferol and its therapeutic applications in the treatment of cancer, **skin diseases** and immune disorders
INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**; Thoden, James B.; Holden, Hazel M.; **Gowlugari, Sumithra**; Grzywacz, Pawel
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051828	A2	20030626	WO 2002-US39715	20021212
WO 2003051828	A3	20030912		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003158157	A1	20030821	US 2002-78204	20020218
US 6627622	B2	20030930		
CA 2468833	A1	20030626	CA 2002-2468833	20021212
AU 2002359680	A1	20030630	AU 2002-359680	20021212
AU 2002359680	B2	20071018		
US 2003204103	A1	20031030	US 2002-317467	20021212
US 6835723	B2	20041228		
EP 1453798	A2	20040908	EP 2002-794233	20021212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005513066	T	20050512	JP 2003-552716	20021212
CN 1620431	A	20050525	CN 2002-828104	20021212
NZ 533424	A	20060831	NZ 2002-533424	20021212
US 2004033998	A1	20040219	US 2003-462272	20030616
US 6887860	B2	20050503		
MX 2004PA05652	A	20050323	MX 2004-PA5652	20040611
US 2005096300	A1	20050505	US 2004-11704	20041214
HK 1077804	A1	20071109	HK 2005-109794	20051103
PRIORITY APPLN. INFO.:			US 2001-341138P	P 20011213
			US 2002-78204	A 20020218
			WO 2002-US39715	W 20021212
			US 2003-462272	A3 20030616

AB This invention discloses (20S)-1α-hydroxy-2-methylene-19-norbishomopregnacalciferol (I), pharmaceutical uses therefor, and a method of purifying this compound to obtain it in crystalline form. I exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. I also has little, if any, calcemic activity and therefore may be used to treat immune disorders in humans as well as renal osteodystrophy.

L32 ANSWER 30 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:390842 HCAPLUS Full-text

DOCUMENT NUMBER: 138:363223

TITLE: Methods for the uses of 1α-Hydroxy-2-methylene-19-nor-pregnacalciferol in the treatment of cancer, **skin diseases** and immune disorders

INVENTOR(S): **Deluca, Hector F.**; Plum, Lori A.; **Clagett-Dame, Margaret**

PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA

SOURCE: U.S., 13 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6566352	B1	20030520	US 2002-77916	20020218
CA 2474771	A1	20030918	CA 2002-2474771	20021210
WO 2003075932	A1	20030918	WO 2002-US39390	20021210
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002360534	A1	20030922	AU 2002-360534	20021210
EP 1482951	A1	20041208	EP 2002-795796	20021210
EP 1482951	B1	20061004		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002015579	A	20041221	BR 2002-15579	20021210
CN 1620299	A	20050525	CN 2002-828180	20021210
JP 2005523906	T	20050811	JP 2003-574206	20021210
NZ 534445	A	20060331	NZ 2002-534445	20021210
AT 341330	T	20061015	AT 2002-795796	20021210
ES 2274116	T3	20070516	ES 2002-2795796	20021210
MX 2004PA07618	A	20050419	MX 2004-PA7618	20040806
HK 1077508	A1	20070525	HK 2005-109588	20051027
PRIORITY APPLN. INFO.:			US 2002-77916 A	20020218
			WO 2002-US39390 W	20021210

AB This invention discloses 1α-hydroxy-2-methylene-19-nor- pregnacalciferol and pharmaceutical uses therefor. This compound exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. This compound also has little, if any, calcemic activity and therefore may be used to treat immune disorders in humans as well as renal osteodystrophy.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 31 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:619268 HCAPLUS Full-text
DOCUMENT NUMBER: 137:309976
TITLE: The role of vitamin A in mammalian reproduction and embryonic development
AUTHOR(S): **Clagett-Dame, Margaret; DeLuca, Hector F.**
CORPORATE SOURCE: Department of Biochemistry and Pharmaceutical Sciences Division, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Annual Review of Nutrition (2002), 22, 347-381
CODEN: ARNTD8; ISSN: 0199-9885
PUBLISHER: Annual Reviews Inc.
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Since the late 1980s, there has been an explosion of information on the mol. mechanisms and functions of vitamin A. This review focuses on the essential role of vitamin A in female reproduction and embryonic development and the metabolism of vitamin A (retinol) related to these functions. Data strongly show that in situ-generated all-trans-retinoic acid (atRA) is the functional form of vitamin A in female reproduction and embryonic development. This is supported by the reversal of most reproductive and developmental blocks found in vitamin A deficiency with atRA, the block in embryonic development that occurs in retinaldehyde dehydrogenase type 2 null mutant mice, and the essential roles of the retinoic acid receptors, at least in embryogenesis. Early studies of embryos from marginally vitamin A-deficient (VAD) pregnant rats revealed a collection of defects called the vitamin A-deficiency syndrome. Manipulation of dietary atRA levels in VAD female rats during reproduction cycle has become an important new tool in deciphering the points of atRA function in early embryos and has provided means to generate large nos. of embryos at later stages of development with the vitamin A-deficiency syndrome. The essentiality of the **retinoid** receptors in mediating the activity of atRA is exemplified by the many compound null mutant embryos that now recapitulate both the original vitamin A-deficiency syndrome and exhibit new defects, many of which can also be observed in the VAD-atRA-supported rat embryo model and in retinaldehyde dehydrogenase type 2 (RALDH2) mutant mice. A major task for the future is to elucidate the atRA-dependent pathways that are normally operational in vitamin A-sufficient animals and that are perturbed in vitamin A deficiency, thus leading to the characteristic VAD phenotypes described above.

REFERENCE COUNT: 230 THERE ARE 230 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 32 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:332679 HCAPLUS Full-text

DOCUMENT NUMBER: 136:335278

TITLE: 1α-Hydroxy-2-methylene-19-nor-homopregnacalciferol and its therapeutic uses

INVENTOR(S): **DeLuca, Hector F.**; Sicinski, Rafal R.; **Gowlugari, Sumithra**; Plum, Lori A.; **Clagett-Dame, Margaret**

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U. S. Ser. No. 657,828.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002052350	A1	20020502	US 2001-878438	20010611
US 6440953	B2	20020827		
PT 1315504	T	20041231	PT 2001-942154	20010611
ES 2227215	T3	20050401	ES 2001-1942154	20010611
US 2002183289	A1	20021205	US 2002-165123	20020607
US 6579861	B2	20030617		
PRIORITY APPLN. INFO.:			US 2000-657828	A2 20000908
			US 2001-878438	A3 20010611

AB The invention discloses 1α-hydroxy-2-methylene-19-nor- homopregnacalciferol and its pharmaceutical uses. This compound exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their

differentiation to the monocyte thus evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. This compound also has little, if any, calcemic activity and therefore may be used to treat immune disorders in humans as well as renal osteodystrophy.

L32 ANSWER 33 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:184908 HCAPLUS Full-text
DOCUMENT NUMBER: 136:226818
TITLE: 1Alpha-Hydroxy-2-methylene-19-nor-homopregnacalciferol and its therapeutic applications
INVENTOR(S): **Deluca, Hector F.**; Sicinski, Rafal R.; **Gowlugari, Sumithra**; Plum, Lori A.; **Clagett-Dame, Margaret**
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020021	A1	20020314	WO 2001-US18710	20010611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2420026	A1	20020314	CA 2001-2420026	20010611
AU 200175445	A	20020322	AU 2001-75445	20010611
EP 1315504	A1	20030604	EP 2001-942154	20010611
EP 1315504	B1	20040818		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001013703	A	20030722	BR 2001-13703	20010611
JP 2004512276	T	20040422	JP 2002-524505	20010611
JP 4022144	B2	20071212		
AT 273709	T	20040915	AT 2001-942154	20010611
NZ 524657	A	20041224	NZ 2001-524657	20010611
PT 1315504	T	20041231	PT 2001-942154	20010611
ES 2227215	T3	20050401	ES 2001-1942154	20010611
MX 2003PA01969	A	20030624	MX 2003-PA1969	20030306
PRIORITY APPLN. INFO.:			US 2000-657828 A	20000908
			WO 2001-US18710 W	20010611

AB This invention discloses 1α-hydroxy-2-methylene-19-nor- homopregnacalciferol and pharmaceutical uses therefor. This compound exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte this evidencing use as an anti-cancer agent and for the treatment of **skin diseases** such as psoriasis as well as skin conditions such as wrinkles, slack skin, dry skin and insufficient sebum secretion. This compound also has little, if any calcemic activity and

therefore may be used to treat immune disorders in humans as well as renal osteodystrophy.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 34 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:745261 HCAPLUS Full-text
DOCUMENT NUMBER: 130:65715
TITLE: Defects in embryonic hindbrain development and fetal resorption resulting from vitamin A deficiency in the rat are prevented by feeding pharmacological levels of all-trans-retinoic acid
AUTHOR(S): White, Jeffrey C.; Shankar, V. Narayanaswamy; Highland, Margaret; Epstein, Miles L.; **DeLuca, Hector F.**; **Clagett-Dame, Margaret**
CORPORATE SOURCE: School Pharmacy, University Wisconsin, Madison, WI, 53706, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1998), 95(23), 13459-13464
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Vitamin A is required for reproduction and normal embryonic development. All-trans-retinoic acid (RA) can support the development of mammalian embryos to parturition in vitamin A-deficient (VAD) rats. At embryonic day (E) 0.5, VAD dams were fed purified diets containing 12 μg RA/g feed (230 μg/rat/day), 250 μg RA/g of diet (4.5 mg/rat/day), or 100 units of retinyl palmitate per day. An addnl. group was fed both 250 μg RA/g feed in combination with retinyl palmitate. Embryonic survival to E12.5 was similar in all groups. The development in the group fed 12 μg RA/g diet was grossly abnormal. The most notable defects were in the region of the hindbrain, which included loss of posterior cranial nerves (IX, X, XI, XII) and postotic pharyngeal arches and the presence of ectopic otic vesicles and swollen anterior cardinal vein. All abnormalities at E12.5 were prevented by feeding pharmacol. amts. of RA (250 μg/g diet) or retinyl palmitate. Embryos from VAD dams fed 12 μg RA/g diet were resorbed by E18.5, whereas those in the group fed 250 μg RA/g diet survived to parturition but died shortly thereafter. Equivalent results were obtained by using com. grade RA or RA purified to eliminate contamination by neutral **retinoids**, such as retinol. Thus, 250 μg RA/g diet fed to VAD dams can prevent the death of embryos at midgestation and prevent early embryonic abnormalities when VAD dams are fed insufficient amts. of RA.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 35 OF 35 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:479844 HCAPLUS Full-text
DOCUMENT NUMBER: 122:231665
TITLE: Identification of the porcine intestinal accessory factor that enables DNA sequence recognition by vitamin D receptor
AUTHOR(S): Munder, Michael; Herzberg, Ian M.; Zierold, Claudia; Moss, Valerie E.; Hanson, Kris; **Clagett-Dame, Margaret**; **DeLuca, Hector F.**
CORPORATE SOURCE: Dep. Biochem., Coll. Agricultural Life Sci., Madison, WI, 53706, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1995), 92(7), 2795-9
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The nuclear accessory protein in porcine intestinal nuclear exts. that activates the binding of the vitamin D receptor to its vitamin D response elements has been highly purified. It contains a protein that binds 9-cis-[3H]retinoic acid, was detected on immunoblots with an anti- **retinoid** X receptor (RXR) peptide antibody, and supports the binding of retinoic acid receptor γ to the retinoic acid receptor β gene response element. Most important, the two specific complexes formed by porcine nuclear extract with the vitamin D response elements from either the osteocalcin gene or the rat 24-hydroxylase gene are shifted to a larger complex by both an anti-vitamin D receptor antibody and an anti-RXR antibody, leaving no doubt that in vivo the nuclear accessory factor for the vitamin D receptor in the intestine is an RXR protein.

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